

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered). Please CANCEL claims 9, 12, 50, 52, 60 and 62 without prejudice or disclaimer and AMEND claims 11, 13, 14, 16, 17, 29-35, 39, 40, 51, 53, 54, 56 and 57 in accordance with the following:

9. (CANCELLED)

10. (PREVIOUSLY CANCELLED)

11. (CURRENTLY AMENDED) A method of compensating for a tilt and a defocus of an optical recording medium, the method comprising:

detecting the defocus of the optical recording medium;

compensating a write pulsepower level with respect to the detected defocus ~~using a predetermined scheme, wherein the write pulse comprises a predetermined recording pattern;~~

detecting the tilt of the optical recording medium; and

compensating the write pulsepower level and a write time with respect to the detected tilt so as to shift ~~the~~ recording pattern with respect to the detected tilt.

12. (CANCELLED)

13. (CURRENTLY AMENDED) The method of claim 11, wherein the compensating of the write pulsepower level and the write time with respect to the detected tilt comprises:

shifting the recording pattern with respect to the detected tilt by both an amount that the recording pattern was shifted due to the detected tilt, and in a direction opposite to the direction that the recording pattern was shifted due to the detected tilt; and

adjusting ~~at~~ the write power level and ~~at~~ the write time required for recording with respect to the detected tilt in order to compensate for a size of a recording mark corresponding to a recording signal.

14. (CURRENTLY AMENDED) The method of claim 13, wherein
~~the adjusting the write power level comprises adjusting a write power is adjusted~~ to
compensate a length of the recording mark, and
~~the adjusting the write time comprises adjusting the write time is adjusted~~ to compensate
a width of the recording mark.

15. (ORIGINAL) The method of claim 14, wherein adjusting the recording mark width
comprises adjusting an ending time of a first pulse and/or a starting time of a last pulse of the
recording pattern.

16. (CURRENTLY AMENDED) The method of claim 11, wherein the compensating
of the write ~~pulse~~power level and the write time with respect to the detected tilt comprises:

adjusting ~~at the~~ write power level to compensate a length of a recording mark
corresponding to a recording signal, and
adjusting ~~at the~~ write power time of a multi-pulse chain of the recording pattern to adjust a
width of the recording mark.

17. (CURRENTLY AMENDED) A method for compensating input data for a tilt and/or
a defocus of an optical recording medium, which records marks and spaces by write pulses
having a predetermined recording pattern, the method comprising:

detecting the tilt and the defocus of the optical recording medium; and
adaptively compensating the recording pattern with respect to the detected tilt and/or
defocus using a memory, wherein the memory stores data comprising
a write power level to compensate with respect to the detected defocus, and
at the write power level and a write time required for recording to compensate for an
amount of shift of the recording pattern, and
~~a power and a time required for recording~~ to compensate for a length and a width of a
recording mark with respect to the detected tilt and/or a length of the recording mark.

29. (CURRENTLY AMENDED) An apparatus which records and/or reproduces
information on an optical recording medium, and which compensates for tilt and/or defocus, the
apparatus comprising:

a tilt and/or defocus detector which detects the tilt and the defocus of the optical
recording medium; and

a recording compensator which compensates a write power level and/or a write time of a recording pulse with respect to the detected tilt and defocus using a predetermined scheme to adjust a length and a width of a recording mark according to the detected tilt and/or defocus, wherein the recording pulse comprises a predetermined recording pattern.

30. (CURRENTLY AMENDED) The apparatus of claim 29, wherein, according to the predetermined scheme, said recording compensator adjusts ~~at~~ the write power level required for recording the recording pulse with respect to the detected defocus.

31. (CURRENTLY AMENDED) The apparatus of claim 29, wherein, according to the predetermined scheme, said recording compensator adjusts ~~A~~ the write power level and the write time required for recording the recording pulse with respect to the detected tilt.

32. (CURRENTLY AMENDED) The apparatus of claim 29, wherein said recording compensator adjusts ~~at~~ the write power level with respect to the detected defocus, and generates the recording pulse earlier to compensate for an amount of shift with respect to the detected tilt, and adjusts ~~at~~ the write power level and/or the write time of the shifted recording pulse to compensate the length and the width of the recording mark.

33. (CURRENTLY AMENDED) The apparatus ~~for compensating~~ of claim 32, wherein said recording compensator adjusts the write power level required for recording to compensate the length of the recording mark, and adjusts the write time required for recording in order to compensate the width of the recording mark.

34. (CURRENTLY AMENDED) The apparatus of claim 33, wherein said recording compensator adjusts the write power level ~~by adjusting a write power~~ to compensate the length of the recording mark, and adjusts the write time ~~by adjusting at~~ an ending time of a first pulse and/or a starting time of a last pulse to compensate the width of the recording mark.

35. (CURRENTLY AMENDED) The apparatus of claim 32, wherein said recording compensator ~~both~~ adjusts the write power level ~~by adjusting a write power~~ to compensate the length of the recording mark, and adjusts ~~at~~ the write power level of a multi-pulse chain of recording pattern to compensate the width of the recording mark.

36. (ORIGINAL) The apparatus of claim 29, further comprising a luminance source which provides the recording pulse, wherein a wavelength of the luminance source is equal to or less than approximately 430 nm.

37. (ORIGINAL) The apparatus of claim 29, further comprising an objective lens having a numerical aperture greater than or equal to 0.6, and wherein the optical recording medium further comprises a substrate having a thickness greater than or equal to 0.3 mm.

38. (ORIGINAL) The apparatus of claim 29, further comprising an objective lens having a numerical aperture greater than or equal to 0.7, and wherein the optical recording medium further comprises a substrate having a thickness less than or equal to 0.3 mm.

39. (CURRENTLY AMENDED) An apparatus, which records marks and spaces by write pulses having a predetermined recording pattern, and which compensates input data for tilt and/or defocus of an optical recording medium, the apparatus comprising:

a tilt and defocus detector which detects the tilt and defocus of the optical recording medium;

a tilt and defocus compensator which adaptively compensates the recording pattern with respect to the detected tilt and defocus; and

a memory storing data comprising

a write power level to compensate with respect to the detected defocus,

a write power level and a write time required for recording in order to compensate an amount of shift of the recording pattern, and

~~a power and time required~~ to compensate a length and a width of a recording mark with respect to the detected tilt and/or length of the recording mark.

40. (CURRENTLY AMENDED) The apparatus of claim 39, wherein the data stored in the memory comprises

a write power level and/or a write time and an amount of shift required for recording to compensate when defocus and tilt occur together, and

a write power level and/or a write time and an amount of shift required for recording to compensate when defocus or tilt occurs.

49. (CURRENTLY AMENDED) A computer readable medium storing a computer

program having instructions which, when executed by a processor, cause the processor to perform a method, the method comprising:

detecting a defocus of an optical recording medium;

detecting a tilt of the optical recording medium; and

adaptively compensating a length and a width of a recording signal with respect to the detected defocus and tilt using a predetermined scheme stored in a memory by adjusting a write power level and a write time required for recording with respect to the detected tilt to compensate for a size of a recording mark corresponding to the recording signal.

50. (CANCELLED)

51. (CURRENTLY AMENDED) A computer readable medium storing a computer program having instructions which, when executed by a processor, cause the processor to perform a method, the method comprising:

detecting a defocus of an optical recording medium;

adaptively compensating a write pulsepower level with respect to the detected defocus using a predetermined scheme write power level information stored in a memory, wherein the write pulsepower level comprises a predetermined recording pattern;

detecting a tilt of the optical recording medium; and

adaptively compensating the write pulsepower level and a write time with respect to the detected tilt so as to shift the recording pattern with respect to the detected tilt.

52. (CANCELLED)

53. (CURRENTLY AMENDED) The computer readable medium of claim 51, wherein compensating the write pulsepower level with respect to the detected tilt further comprises:

shifting the recording pattern within the write pulse with respect to the detected tilt by both an amount that the recording pattern was shifted due to the detected tilt, and in a direction opposite to the direction that the recording pattern was shifted due to the detected tilt; and

adjusting a the write power level and a the write time required for recording with respect to the detected tilt in order to compensate for a size of a recording mark corresponding to a recording signal.

54. (CURRENTLY AMENDED) The computer readable medium of claim 53, wherein

~~the adjusting the power comprises adjusting a~~ the write power level is adjusted to compensate a length of the recording mark, and

~~the adjusting the write time comprises adjusting the write time~~ is adjusted to compensate a width of the recording mark.

55. (ORIGINAL) The computer readable medium of claim 54, wherein adjusting the recording mark width comprises adjusting an ending time of a first pulse or a starting time of a last pulse of the recording pattern.

56. (CURRENTLY AMENDED) The computer readable medium of claim 51, wherein the compensating the write ~~pulse~~power level with respect to the detected tilt comprises:

adjusting ~~a~~the write power level to compensate a length of a recording mark corresponding to a recording signal, and

adjusting ~~a~~the write power level of a multi-pulse chain of the recording pattern to adjust a width of the recording mark.

57. (CURRENTLY AMENDED) A method of compensating for defocus and/or tilt of an optical recording medium, the method comprising:

detecting a defocus of an optical recording medium;

compensating a write ~~pulse~~power level with respect to the detected defocus ~~using a predetermined scheme;~~

detecting a tilt of the optical recording medium; and

compensating the write ~~pulse~~power level and a write time with respect to the detected tilt so as to adjust a length and a width of a recording mark in accordance with the detected tilt.

58. (ORIGINAL) The method of claim 11, wherein the detected defocus and the detected tilt are detected using a light beam having a wavelength of roughly 430 nm or less.

59. (ORIGINAL) The method of claim 17, wherein the detected defocus and the detected tilt are detected using a light beam having a wavelength of roughly 430 nm or less.

60. (CANCELLED)

61. (ORIGINAL) The computer readable medium of claim 49, wherein the detected

defocus and the detected tilt are detected using a light beam having a wavelength of roughly 430 nm or less.

62. (CANCELLED)

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Cond.

63. (ORIGINAL) The method of claim 57, wherein the detected defocus and the detected tilt are detected using a light beam having a wavelength of roughly 430 nm or less.
